Name of product

Foray, containing *Bacillus thuringiensis var. kurstaki (Btk)* 

Type of product

Bacterial insecticide

How Btk is made

Btk is a strain of common soil bacterium that occurs naturally. It is cultured by fermenting grains and potatoes with fish or corn meal, similar to brewing beer. The final product contains 90% water, the leftover growth medium, carbohydrates, inert ingredients approved as food additives, and the active ingredient.

**How Btk works** 

The active ingredient is a caterpillar specific protein toxin produced by bacteria when the product is fermented. The protein interacts with specific bacteria within the digestive tract of certain caterpillar species that eat it. The process kills the caterpillar within a few days.

What Btk affects

Different strains of *Bacillus thuringiensis* affect different species of insects. The kurstaki strain affects some, but not all caterpillars of moths and butterflies that ingest it. Btk degrades rapidly so it only affects susceptible caterpillars that feed on treated leaves within about 10 days of it being applied. Some caterpillars affected by suppression program sprays of Btk are gypsy moth, tent caterpillars, and Karner blue butterfly. Numerous studies have documented no apparent toxicity for humans, pets, wild animals, birds, honeybees, or fish.

**Avoiding exposure to Btk** 

For state gypsy moth treatments, we do not use Btk in Karner blue butterfly Recovery Zones or areas where there are other threatened or endangered species of moths and butterflies that could be harmed. Instead, a treatment with "Gypchek," a gypsy moth specific virus, is used in these areas. Gypchek is produced in limited quantities and can't be used for all treatments.

If you are concerned about your butterfly garden plants being sprayed, place a tarp over them the night before a spray is scheduled. Then, remove it after spraying is completed. You can see if your garden is in a spray block by going to <a href="http://gypsymoth.wi.gov">http://gypsymoth.wi.gov</a>. To find out when a spray is scheduled for a particular area you can call 1-800-642-MOTH daily starting in mid-May until your block is completed. Or you can sign up for automatic email updates of the spray schedule at the website above in the section on Who to Contact. Btk breaks down in about 10 days in sunlight, so areas previously treated will not harm caterpillars feeding there later in the same season.

Due to rare cases of mild, short-lasting allergic reactions by humans, you may wish to stay indoors with the windows closed or leave the area during a spray if you have severe food allergies or chemical sensitivity.